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☐	L11	l9 same ((web site) or (web page)) same (monitor$ or trace or tracing or track$ or spy$ or spied)	1
☐	L10	L9 and l1	0
☐	L9	(user or client$) near4 control$ near4 disseminat$	15
☐	L8	l7 not l4	6
☐	L7	l1 near8 (monitor$ or trace or tracing or track$ or spy$ or spied)	7
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☐	L6	L5 near8 (monitor$ or trace or tracing or track$ or spy$ or spied)	1
☐	L5	((request$ or access$) near4 ((web page) or (web site))) near8 (profil$ or characteristic$ or parameter$ or statistic$)	43
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☐	L4	l1 and L3	13
☐	L3	709/224[ccls]	1666
☐	L2	L1 same (third party)	1
☐	L1	((request$ or access$) near4 ((web page) or (web site))) near8 (profil$ or characteristic$ or parameter$ or statistic$)	144

END OF SEARCH HISTORY

US006581072B1

(12) **United States Patent**
Mathur et al.

(10) **Patent No.: US 6,581,072 B1**
(45) **Date of Patent: Jun. 17, 2003**

(54) **TECHNIQUES FOR IDENTIFYING AND ACCESSING INFORMATION OF INTEREST TO A USER IN A NETWORK ENVIRONMENT WITHOUT COMPROMISING THE USER'S PRIVACY**

(76) Inventors: **Rakesh Mathur**, 517 W. Highland Dr., Seattle, WA (US) 98119; **Ramesh Subramonian**, 1978 Edgewood Dr., Palo Alto, CA (US) 94303; **Ramana Venkata**, 2336 California St. #9, Mountain View, CA (US) 95040; **Pangal P. Nayak**, 801 Talisman Dr., Palo Alto, CA (US) 94303; **Joy A. Thomas**, 492 Nuestra Ave., Sunnyvale, CA (US) 95086

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 7 days.

(21) Appl. No.: **09/861,463**

(22) Filed: **May 17, 2001**

Related U.S. Application Data

(60) Provisional application No. 60/206,190, filed on May 22, 2000, and provisional application No. 60/205,938, filed on May 18, 2000.

(51) **Int. Cl.**[7] **G06F 7/00**
(52) **U.S. Cl.** **707/104.1**; 707/3; 705/26
(58) **Field of Search** 707/104.1, 3; 709/26

(56) **References Cited**

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6,119,101 A * 9/2000 Peckover 705/26

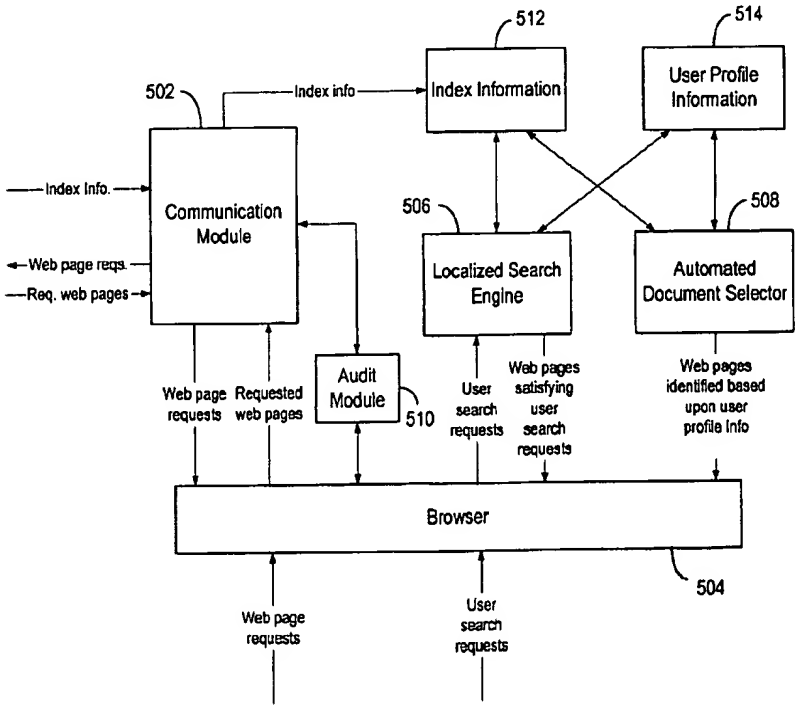
* cited by examiner

Primary Examiner—Charles Rones
(74) *Attorney, Agent, or Firm*—Townsend and Townsend and Crew LLP

(57) **ABSTRACT**

Techniques for identifying and accessing documents (e.g., web pages) of interest to a user in a network environment without compromising the user's privacy. A user system receives index information comprising information related to documents stored in a network environment. The index information is then used to identify and access documents of interest to the user. The identification of documents of interest to the user is performed on the user system thus obviating the need to provide any information to search engines executing on remote servers. The present invention preserves user privacy by controlling and minimizing the communication and collection of user-related information from the user system. Merely by way of example, the present invention allows users to identify and access web pages from web servers coupled to a communication network such as the Internet without compromising user privacy.

45 Claims, 5 Drawing Sheets



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L11: Entry 1 of 1 File: USPT Jun 17, 2003

DOCUMENT-IDENTIFIER: US 6581072 B1
TITLE: Techniques for identifying and accessing information of interest to a user in a network environment without compromising the user's privacy

Detailed Description Text (2):
According to the present invention techniques are provided which allow a user to identify and access documents (e.g., web pages) of interest to the user in a network environment without compromising the user's privacy. More particularly, according to an embodiment of the present invention, the user can identify and access documents of interest to the user at the user system itself without having to have to provide user-related information to search engines executing on remote servers. The present invention preserves user privacy by controlling and minimizing the tracking and communication of user-related information from the user system. Techniques according to the present invention allow the user to control the dissemination of information related to documents and their contents accessed by the user. Merely by way of example, the present invention allows a user to identify web pages of interest to the user and to access the relevant web pages from web servers coupled to a communication network such as the Internet without compromising user privacy.

US006581072B1

(12) **United States Patent**
Mathur et al.

(10) **Patent No.: US 6,581,072 B1**
(45) **Date of Patent: Jun. 17, 2003**

(54) **TECHNIQUES FOR IDENTIFYING AND ACCESSING INFORMATION OF INTEREST TO A USER IN A NETWORK ENVIRONMENT WITHOUT COMPROMISING THE USER'S PRIVACY**

(76) Inventors: **Rakesh Mathur**, 517 W. Highland Dr., Seattle, WA (US) 98119; **Ramesh Subramonian**, 1978 Edgewood Dr., Palo Alto, CA (US) 94303; **Ramana Venkata**, 2336 California St. #9, Mountain View, CA (US) 95040; **Pangal P. Nayak**, 801 Talisman Dr., Palo Alto, CA (US) 94303; **Joy A. Thomas**, 492 Nuestra Ave., Sunnyvale, CA (US) 95086

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(51) **Int. Cl.**[7] **G06F 7/00**
(52) **U.S. Cl.** **707/104.1**; 707/3; 705/26
(58) **Field of Search** 707/104.1, 3; 709/26

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,119,101 A * 9/2000 Peckover 705/26

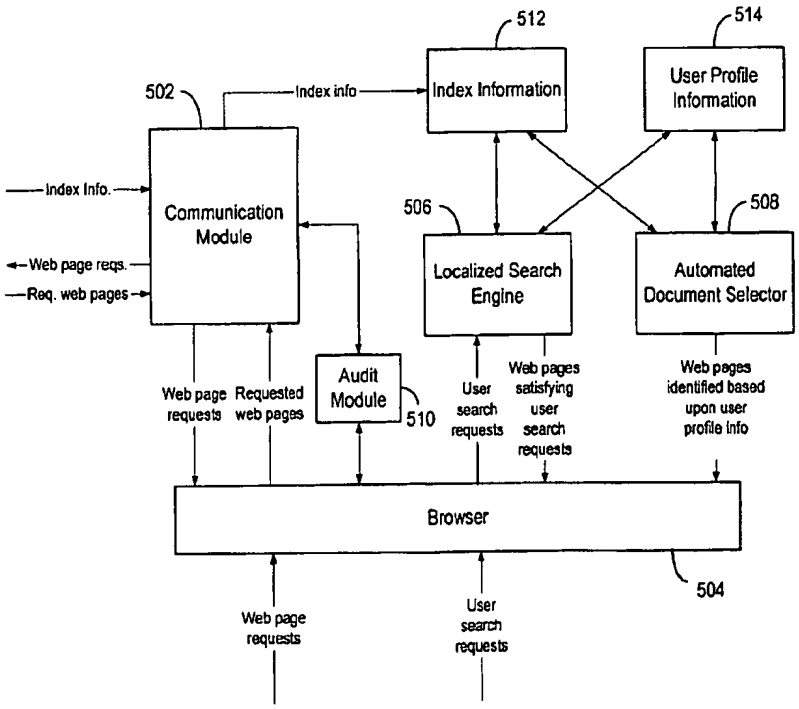
* cited by examiner

Primary Examiner—Charles Rones
(74) *Attorney, Agent, or Firm*—Townsend and Townsend and Crew LLP

(57) **ABSTRACT**

Techniques for identifying and accessing documents (e.g., web pages) of interest to a user in a network environment without compromising the user's privacy. A user system receives index information comprising information related to documents stored in a network environment. The index information is then used to identify and access documents of interest to the user. The identification of documents of interest to the user is performed on the user system thus obviating the need to provide any information to search engines executing on remote servers. The present invention preserves user privacy by controlling and minimizing the communication and collection of user-related information from the user system. Merely by way of example, the present invention allows users to identify and access web pages from web servers coupled to a communication network such as the Internet without compromising user privacy.

45 Claims, 5 Drawing Sheets



First Hit Fwd Refs

Generate Collection Print

L9: Entry 4 of 15 File: USPT Jun 17, 2003

DOCUMENT-IDENTIFIER: US 6581072 B1
TITLE: Techniques for identifying and accessing information of interest to a user in a network environment without compromising the user's privacy

Brief Summary Text (17):
The user information collected by the search engines and the user profile information built by the search engines, which may be sensitive in nature and contain confidential information, may then be distributed or even sold by providers of search engines to entities such as advertising agencies, government agencies, insurance companies, business entities, and the like. This may result in the user being subjected to unsolicited Spam mail messages, unwelcome advertisements, credit card fraud, mail fraud, banking fraud, and other unwelcome activities. As a result, the use of a conventional search engine executing on a remote server can severely compromise a user's privacy and security. Further, since the information collected by the search engines is typically stored on a server system which is located at a remote location from the user's computer system, the user has very little control on the collection and dissemination of the information.

Detailed Description Text (2):
According to the present invention techniques are provided which allow a user to identify and access documents (e.g., web pages) of interest to the user in a network environment without compromising the user's privacy. More particularly, according to an embodiment of the present invention, the user can identify and access documents of interest to the user at the user system itself without having to have to provide user-related information to search engines executing on remote servers. The present invention preserves user privacy by controlling and minimizing the tracking and communication of user-related information from the user system. Techniques according to the present invention allow the user to control the dissemination of information related to documents and their contents accessed by the user. Merely by way of example, the present invention allows a user to identify web pages of interest to the user and to access the relevant web pages from web servers coupled to a communication network such as the Internet without compromising user privacy.

US006275824B1

(12) **United States Patent**
O'Flaherty et al.

(10) **Patent No.: US 6,275,824 B1**
(45) **Date of Patent: Aug. 14, 2001**

(54) **SYSTEM AND METHOD FOR MANAGING DATA PRIVACY IN A DATABASE MANAGEMENT SYSTEM**

(75) Inventors: **Kenneth W. O'Flaherty**, San Diego; **Richard G. Stellwagen, Jr.**; **Todd A. Walter**, both of Poway, all of CA (US); **Reid M. Watts**; **David A. Ramsey**, both of Lexington, SC (US); **Adriaan W. Veldhuisen**, San Marcos; **Renda K. Ozden**, San Diego, both of CA (US); **Patric B. Dempster**, Atlantic Highlands, NJ (US)

(73) Assignee: **NCR Corporation**, Dayton, OH (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/165,777**

(22) Filed: **Oct. 2, 1998**

(51) **Int. Cl.**[7] **G06F 17/30**

(52) **U.S. Cl.** **707/9**; 707/2; 707/3; 707/10; 707/102; 713/200

(58) **Field of Search** 707/9, 10, 104, 707/2–4; 705/35–37; 713/200–202

(56) **References Cited**

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"FTC Releases Report on Consumer' Online Privacy", Report to Congress on Privacy Online, Jun. 4, 1998, at http://www.ftc.gov/opa/9806/privacy2.htm, pp. 1–4.

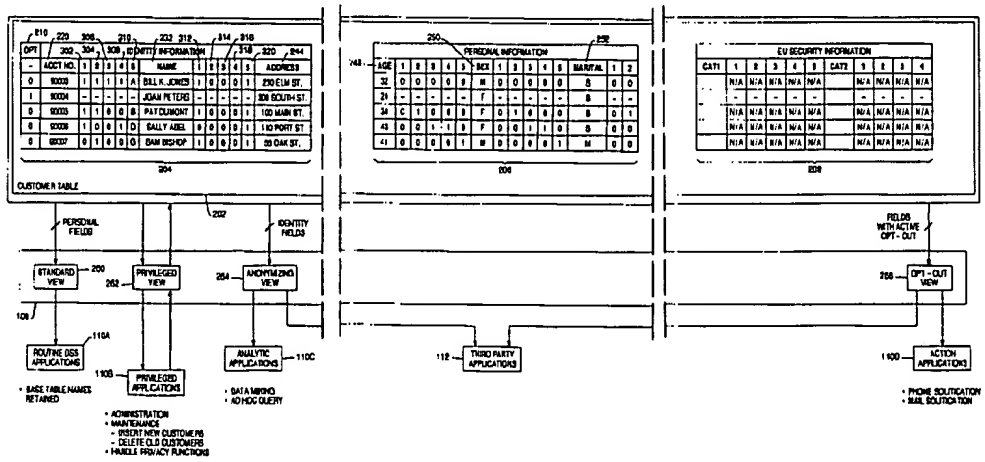
(List continued on next page.)

Primary Examiner—Hosain T. Alam
(74) *Attorney, Agent, or Firm*—Gates & Cooper

(57) **ABSTRACT**

A method, apparatus, and article of manufacture for managing data privacy in a database management system is disclosed. The apparatus comprises a database management system, for storing and retrieving data from a plurality of database tables wherein the data in the database tables is controllably accessible according to privacy parameters stored in the database table, a database management system interface operatively coupled to the database management system and controlling access to the data within the database tables according to the privacy parameters, and an audit module, communicatively coupled to the database management system interface, for validating enforcement of the data privacy parameters in the database management system.

11 Claims, 12 Drawing Sheets



L9: Entry 8 of 15 File: USPT Aug 14, 2001

DOCUMENT-IDENTIFIER: US 6275824 B1
TITLE: System and method for managing data privacy in a database management system

Detailed Description Text (74):
FIG. 8 is a flow chart illustrating exemplary operations used to accept an access request message from the data source. The present invention also allows the client (or data source) to access and control the collection, storage, and dissemination of personal data via the privileged view 262. First, an access request message is accepted from the client, as shown in block 802. Then, a privileged dataview 262 is provided to the client, as shown in block 804. The privileged dataview 262 provides access to the client's personal privacy parameters, and allows the client to view and change these preferences.

US006701362B1

(12) **United States Patent**
Subramonian et al.

(10) **Patent No.: US 6,701,362 B1**
(45) **Date of Patent: Mar. 2, 2004**

(54) **METHOD FOR CREATING USER PROFILES**

(75) Inventors: **Ramesh Subramonian**, Palo Alto, CA (US); **Ramana Venkata**, Mountain View, CA (US); **Pangal P. Nayak**, Palo Alto, CA (US); **Joy A. Thomas**, Sunnyvale, CA (US)

(73) Assignee: **PurpleYogi.com Inc.**, Mountain View, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/510,902**

(22) Filed: **Feb. 23, 2000**

(51) **Int. Cl.**[7] **G06F 15/173**; G06F 15/16; G06F 12/14

(52) **U.S. Cl.** **709/224**; 709/228; 713/200

(58) **Field of Search** 709/224, 218, 709/227, 228, 203, 229; 707/2, 3, 10; 345/745; 705/10, 14; 713/200

(56) **References Cited**

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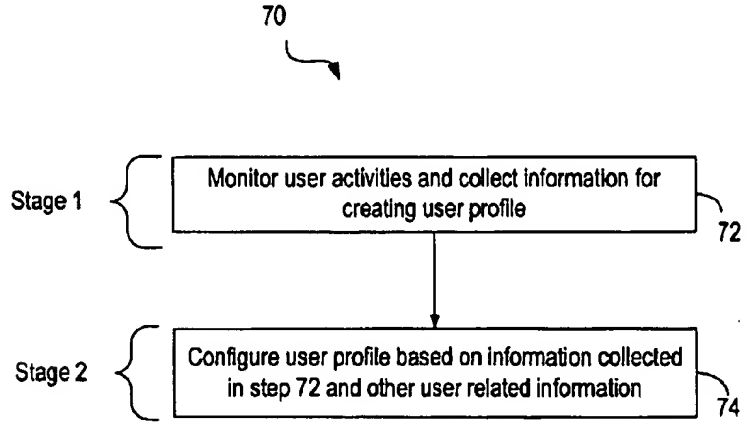
Primary Examiner—Jason D. Cardone
(74) *Attorney, Agent, or Firm*—Townsend and Townsend and Crew LLP

(57) **ABSTRACT**

A method for creating personalized user profiles using a client computer. A client computer executes a method which monitors user activities and collects content and context information based on the monitored user activities. The client computer processes the content and context information to determine concepts of interest to the user and the user's level of interest in the concepts. Information related to the concepts and the user's interest level associated with the concepts is used to create a personalized profile for the user on the client computer.

17 Claims, 6 Drawing Sheets



L9: Entry 1 of 15 File: USPT Mar 2, 2004

DOCUMENT-IDENTIFIER: US 6701362 B1
TITLE: Method for creating user profiles

Brief Summary Text (9):
Other techniques allow users to build personal web pages and to customize the contents of the web pages. Such a technique is used by Yahoo.TM. for their My Yahoo.TM. service. While this technique is an improvement over the "subject category" techniques described above, it has a drawback in that it presumes that the user has prior knowledge of web pages which are of interest to the user. Web pages which may have been of interest to the user, if known by the user, cannot be facilitated by this technique. Further, information regarding the contents of a personalized user web page is usually stored on a web server remote from the user's client computer. This raises several security concerns for the user since the user has very little control over the collection and dissemination of the personalized information.

Brief Summary Text (13):
Thus, there is a need for a method which facilitates collection of user related information while minimizing the problems associated with conventional techniques. It is further desired that the user have complete control over the collection and dissemination of the information.